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THE COMMITTEE ON EDUCATIONAL RESEARCH

*Faculty of Education
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Editorial

Psychological studies rather dominate this issue, three reports being presented. The Lent study is one of adjustment problems among high school girl students. Beginning with the terse statement that "the period of adolescence is not the happy, carefree age it is frequently supposed to be" to the last Table dealing with heterosexual problems, the reader is made progressively aware of the kind and extent of adolescent problems.

The percentages shown in the Tables relate to the total population of 425 adolescent girls and no not, because of the multiplicity of problems in certain individuals and the total absence of problems in others, add to the convenient 100%.

Obviously the categorization of problems is necessarily artificial, but within the frame-work set up it is interesting to note the high incidence of personal-psychological problems in contrast to the infrequency of mention of moral and religious problems.

Two further studies deal with the inter-personal relationships among adolescents. Munro's is a case study of high school boys, aiming at an insight into the structure of a peer group and into the factors influencing the behavior of its members. Because of the case method employed numbers are necessarily small. Nevertheless some interesting, if tentative, conclusions emerge. One is that, even in small groups, social status is recognized in establishing personal relationships, and another that boys most accepted by their peers tend to be selective of their friends, while those less popular seem to seek group approval.

The third investigation, by Brown, undertakes to assess whatever relationship may exist between one's attitude toward oneself (self evaluation) and similar evaluations of significant others, meaning in this case peers and adults who were chosen on the grounds of their significant relationship to oneself. The particular attitude chosen for study was that of dominance-submission. Curiously enough, on this scale, the self-evaluation, whether of dominance or submissiveness, was found to be reflected in the attitude imputed to others. That is to say, if a youth showed himself submissive on the scale he tended to attribute submissiveness to his significant peers and significant adults. Boys and girls showed the same propensity. Obviously, left unanswered in the question to what extent the subject under study chose as significant peers and significant adults persons so dispositioned as themselves.

Further to personalities, both Professors Clarke and Melsness tell of their personal experiences in travel and study.

We are grateful to Mr. Watts for his excellent review of an outstanding book on English Language Arts.

EDUCATIONAL RESEARCH IN ADMINISTRATION AND SUPERVISION

S. C. T. CLARKE

*Faculty of Education
University of Alberta*

Introduction

In the spring of 1957 the British Dominions and Colonies Program of the Carnegie Corporation awarded the writer a travel grant to study educational research at certain centres on the eastern seaboard of the United States. The purpose of this article is to describe the research in administration and supervision.

Significant research in education is currently expensive, large scale, and requires a staff (preferably a research team). Perhaps for these reasons research in administration and supervision investigated by the author was found to be supported by the Kellogg Foundation in the southeast region, and by the U.S. Office of Education or Ford Foundation grants in the northeast. This observation prompts an interesting question: can education raise, through regular channels, the funds required for significant research? The projects described extend from three to five years and involve grants ranging from \$64,000 to \$261,000. The professional directing staff was typically a team of three to seven professors, aided by graduate students, both paid and working on graduate studies. In the southeast these research teams typically involved educational psychologists, who were intimately associated with the basic theory, the research design, and the execution of the research projects. In some institutions, research in administration and supervision appeared to have absorbed the energies of all interested parties, so that this was the major area in which research was proceeding.

Four additional features of research in administration and supervision appear to be general. First, it is applied or action research, as opposed to pure research. The distinction intended here is that the pure researcher seeks truth, without any intent to use or apply his results; while the applied researcher seeks to influence or change practice as a result of his research findings. The second general feature of research in administration and supervision is that it is closely related to the training program for administrators and supervisors. Graduate students contribute suggestions, reactions, advice; they do field work; they contribute to theory. In turn, the researchers share with these students the purposes and

procedures of their research. In these ways, a very intimate relationship between research and training has developed. The third feature of research in this field is the carefully developed theoretical formulation, which could well be the envy of research in certain other areas. In the southeast the theory appears to stem from the phenomenological approach of Snygg and Combs¹, and an extension and application of this to education by Bills². Other allied theoretical formulations^{3 4 5} are found. In the northeast, there is no uniformity of theoretical formulation, although the same careful delineation is made by each investigator.⁶ A fourth general, although not universal, feature of research in administration and supervision is its focus on personnel problems. The area of study is the man, the job, the situation, and the relationships among these. Stated in another way, the outcomes of the studies would be in selection, training and placement of administrators and supervisors.

Leadership Studies

In 1952 the University of Florida College of Education was awarded a Kellogg grant to study educational leadership of the principal. A group of staff members headed by Vynce Hines met every other Saturday morning for a period of three years to plan and execute the study, and then once a month for the following year. The first stage of this research was a study of how the principal operates in terms of behaviors. The identification of dimensions of behavior, the measurement and validation of these dimensions in the areas of the principal's relationships with individual pupils, individual teachers, the faculty, and lay (community) persons was a major task. Some twenty doctoral dissertations were planned and completed around this stage of the investigation.

Overall findings have not as yet been collated, although articles⁷ describing various phases and aspects have been published.

¹D. Snygg and A. W. Combs, *Individual Behaviour*, New York, 1949.

²Robert E. Bills, "About People and Teaching", *Bulletin, Bureau of School Service, University of Kentucky*, Vol. XXVIII, December, 1955, No. 2.

³Howard Eckel, "An Experiment in Teaching Educational Administration," *Bulletin, Bureau of School Service, University of Kentucky*, Vol. XXVIII, September, 1955, No. 1.

⁴Southern States Cooperative Program in Educational Administration, *Better Teaching in School Administration*, Nashville, McQuitty Printing Co., 1955.

⁵Kimball Wiles, *Supervision for Better Schools*, New York, Prentice Hall, 1955.

⁶Daniel E. Griffiths, *Human Relations in School Administration*, New York, Appleton Century Crofts, 1956.

⁷Kimball Wiles, "The Operation Patterns of Principals" *Nation's Schools*, October, 1955. Hulda Grobman and Vynce Hines, "Foes of Good Community Relations", *ibid.*, Nov., 1955. Hulda Grobman and Lee G. Henderson, "Distance and Disaffection", *Florida Education Association Journal*, Nov., 1955. Vynce Hines and Hulda Grobman, "The Weaker Sex is Losing Out", *School Board Journal*, March, 1955. Vynce Hines and Hulda Grobman, "What a Principal does, Matters", *Phi Delta Kappa*, April, 1956. Rapport in Field Research", *Ed. Admin. and Supervision*, Vol. 42, No. 7, November, 1956. "What Makes a Good Principal", *Bulletin of the National Association of Secondary School Principals*, Vol. 40, No. 223, Nov., 1956. Vynce Hines, "F Scale, Gamin, and Public School Principal Behaviour", *Journal of Educational Psychology* (in press). Vynce Hines and Hulda Grobman, "What Parents Think of Their Schools and What They Know About Them", *Bulletin of the Secondary School Principals Association* (in press).

Instrumentation for measuring identified variables has been developed and validated, including the *Principal Behavior Checklist*, *Bills' Index on Self*, *Bills' Index on Other Principals*, *Teacher Attitude Questionnaire*, *Teacher Activities Questionnaire*, *University of Florida "A Parent's View of the School" Questionnaire* (copyright), *Student Attitude Scale* (printed), and various Q-sorts.

Principal findings to date, as published in the research articles mentioned above, include: (1) No relation was found between the principal's operating pattern and personality qualities measured by the California F. Scale, or G.A.M.I.N. (2) The higher the income level, education level, and the closer to school the parent lived, the more favorable the parent's evaluation of the school, the more he used the school, and the more he was willing to support it. (3) When the preceding factors were held constant, parents favored democratic principal behavior, except parents whose income was below \$2000. (4) When factors listed in (2) were held constant, pupils and teachers preferred democratic principal behavior, and themselves had more favorable attitudes toward education in schools which were operated democratically. (5) Women principals were generally more democratic and effective than men teachers. (6) No relation was found between the operating patterns of the principal and teacher feeling toward or interaction with the community. The second stage of this study, projected forward to 1960, is an experimental investigation of the effects of leadership training programs on the principal, on his behaviors, and through this on his pupils, teachers, and school community. A comparison of on-campus and in-service leadership training programs is proposed. The chief measuring instruments are among those described above, with perhaps refinements and additions.

Other Southern Leadership Centres

Six graduate schools⁸ are cooperating to improve educational leadership in the South. An excellent example of both the team approach and a carefully developed theoretical position as a basis for action and research is found in a *Special Report of the Southern Leadership Centres*⁹. Some of the headings from the table of contents must suffice to delineate the thinking involved: the *tentative conceptual framework*; *beliefs*; *role concepts, relationships*; *acceptance or rejection*; *decision making*; *social change*; *society*; *what powers the spirals?*; *the role of research*; *some research purposes*;

⁸Alabama Polytechnic Institute, University of Arkansas, George Peabody College for Teachers, University of Kentucky, University of Oklahoma, University of Texas.

⁹*Spirals of Change: A Conceptual Framework for Regional Action*, Report of a Special Committee, November, 1956, The Southern Education Foundation, 811 Cypress St. N. E., Atlanta 8, Ga. (mimeographed).

how can design aid our efforts?; building a regional research design; some research clues.

The applied nature of research in the thinking of the cooperating centres in the south is indicated in a heading from the report of the 1956 Gatlinburg Conference. The heading is "Research and Evaluation — Tools of Program Change". While these reports are specific to the region, the statement of theory, the statement of the role of research, and the cooperative design are of general, and should be of wide, interest¹⁰.

The University of Kentucky is selected by this writer to illustrate specific institutional research, which, it must be remembered, is set in the cooperative overall design just mentioned. The two University of Kentucky *Bureau of School Service Bulletins* previously cited are published, and describe the theoretical position and the operation of part of the leadership training program.

As noted before, this research program at the University of Kentucky is supported by a Kellogg grant. It is a deliberate and planned experiment in preparing school leaders. The design is (1) measures before training (2) training (3) measures after training. The measuring instruments include a variety of *Q-Sorts* (to measure abilities, traits, self, leadership, membership, purposes of education); *Bills' Index of Adjustment and Values*; situational written case materials, tapes, and movies; an administrator's projective test; group process analysis; open-end interviews. This research project started in 1955, so it is, at the time of writing, too early to report findings.

Assessment Projects

The Bureau of Reference, Research, and Statistics of the New York City Schools under the direction of Herbert A. Landry conducted studies in assessment. These studies were to develop and test methods of selecting higher administrative personnel. The researchers investigated cartoons, proverbs, ink blots attitude tests, and supervisor effectiveness scales. This research was completed in 1951. Since its nature was the development of instruments, and subsequently these were not used, this research has not been published. Research workers developing similar instrumentation should, however, know that this work has been done.

Teachers College, Columbia University, has been awarded a U.S. Office of Education grant to work in conjunction with Educational Testing Service on the problem of the development of criteria of success in school administration. This is a five year study starting in 1957. The purposes of the study are to develop criteria for the

¹⁰Associated Programs in Educational Administration, Director: Dr. Truman M. Pierce, Dean, School of Education, Alabama Polytechnic Institute, Auburn, Alabama.

evaluation of school administration, to define the nature of the job of the school administrator, and to develop instruments for the selection of school administrators. The proposed steps in the study include (1) survey of current job descriptions and theoretical analysis of the school administrator's job, (2) development of test situations which represent the various aspects of the administrator's job, (3) pilot tryout and revision of the test situations, (4) administration of experimental and other tests on a large scale, (5) analysis of the data, and (6) preparation of a manual and kit of measures. It is expected that perhaps a week of testing, largely of the situational type used by the O.S.S. of the U.S. Armed Services during World War II (but more structured), will be developed. Specifically, there may be letters to answer, telephone calls (on tape), files to refer to, skits or movies to react to. In addition various non-situational tests may be given. Scoring may be in terms of types of solution rather than in terms of pass-fail. The proposed manual and kit would be useful as a *research tool* on problems of school administration, in *evaluating* courses in educational administration, and in the *selection* of candidates for advanced study in educational administration or candidates for administrative posts in large school systems.

A careful theoretical framework for this study is based on the work by Griffith previously cited. The role of the school administrator is conceptually broken down (after Davies) into *the man, the job, and the social setting*. Each of these can in turn be broken down. Another approach, attributed by Griffith to Katz, examines what the administrator does in terms of three skills: *technical, human, and conceptual*. These theoretical approaches are carefully related to the design of the study, which will provide an empirical test.

Field Studies

In the spring of 1957 the Graduate School of Education of Harvard University and the neighboring systems of Concord, Lexington, and Newton were awarded a substantial grant by the Fund for the Advancement of Education (Ford Foundation). The overall scheme is described in the following release from the joint board: "We believe the time has come for a thorough analysis of what is being taught in the schools, by whom, and under what circumstances. This involves more than merely analysis; if action is to take place, it means a new pattern of co-operation between universities and school systems. Proposals should lead to actual programs of experiment and demonstration. Relations between the university and school systems must be established which are analogous to those which have long been in effect between medical schools and teaching

and research hospitals". It is proposed that various patterns of change be tried in the cooperating school systems. Already the systems have been experimenting. For example, one school has tried having an outstanding teacher "teach" two to three hundred students at once with lecture, visual aids, etc.; another has a system whereby housewives who were college majors in English correct English themes of high school students; another school has tried Spanish and French records (homework consists in taking home records rather than books!); while still another school has a system of one master teacher associated with half a dozen other teachers, who in turn are associated with apprentice teachers or teaching aides. One system which is growing rapidly adds many new teachers to its staff each year and therefore has an extensive inservice education program. Harvard hopes to study the effect of these changes (1) in the community, (2) in the classroom, and (3) on the selection and placement of personnel. However, the relationship proposed is not that of an external evaluator. Harvard also proposes to cooperate intimately in planning proposed programs and *in carrying them out in the school system*.

The above describes in general the proposed field studies. More specific details require joint planning and agreement, and will undoubtedly evolve to an extent. The overall aim of these field studies is the improvement of instruction, partially at least by redeployment of personnel. It is clear that these field studies are research on the problems administrators face, in contrast with those previously described in leadership and assessment, which are upon administrators themselves.

A SCIENCE SEMINAR FOR ALBERTA HIGH SCHOOL TEACHERS

H. C. MELSNESS

*Faculty of Education
University of Alberta*

(A report of an experiment in the in-service education of high school science teachers and in cooperative action by industry and education. This report is presented to describe a kind of action research into the improvement of science education in Alberta high schools.)

This three-day seminar was sponsored by the Imperial Oil Company and was held at Edmonton and Calgary on April 24, 25 and 26, 1957. The twenty-three science teachers who participated in the seminar were selected by the High School Inspectors and came from all parts of Alberta. Also taking part were members of the staff of Imperial Oil Limited, the Department of Education and the Faculty of Education. All expenses were borne by Imperial Oil.

Origin of the Seminar:

The Imperial Oil Company had sponsored and conducted a symposium and seminar for University deans, professors and research leaders at Sarnia in 1955. In conversation with members of the Department and the Faculty of Education, officials of the Company expressed an interest in trying a similar plan for high school science teachers. As a result, a committee representing the Department of Education, the Faculty of Education, Imperial Oil Limited and the science teachers was set up to explore the possibilities of such a seminar and to develop a program.

Purposes:

During the early discussions and the planning of the seminar a number of worthwhile purposes were suggested. Among these were the following :

1. To acquaint high school science teachers with various aspects of one of Alberta's leading industries — the oil industry.
2. To attempt to bring about a closer liaison between industry and education generally.
3. To make teachers more aware of the needs of industry in the education and training of its personnel, and of the opportunities that exist for young people in the oil industry.
4. To provide information to science teachers which would help

to enrich and vitalize the teaching of science in the High school program.

The Program:

Members of the staff of Imperial Oil Company in Edmonton and Calgary, in consultation with the committee which had been set up, spent considerable time and careful thought in arranging the program. Notable in this planning was the attempt to relate papers and discussions as clearly as possible to appropriate parts of the high school science curriculum and to other needs of the high school such as vocational guidance. The Company made all arrangements for transportation and living accommodation of the participants.

The first two days were spent in Edmonton. On the evening of the second day the group was flown to Calgary and the third day was spent in studying the company's research laboratory facilities there. The final evaluation session was held in Calgary before members of the group returned home.

For the first two days the program was arranged so that the forenoons were devoted to papers delivered by technical personnel of the company followed by group discussion. The afternoons were used to tour and study some of Imperial Oil Company's facilities in the Edmonton area.

Copies of all addresses as well as much additional material and information were supplied to each participant in loose-leaf binders for later reference.

Following is a condensed outline of the program:

Wednesday, April 24

Morning: Papers on *Oil Exploration and Production*, followed by discussions:

- (a) Exploring for Oil
- (b) Drilling and Its Attendant Problems
- (c) Well Completion and Production
- (d) Gas Gathering and Processing

Afternoon: Tour of Gas Conservation Plant at Devon, and of the Leduc Oil Field.

Evening: Reception and dinner at the Macdonald Hotel at which President Andrew Stewart of the University of Alberta addressed the group.

Thursday, April 25

Morning: Papers on *Manufacturing Processes* followed by discussions:

- (a) Refinery Operations
- (b) Product Quality and Laboratory Techniques
- (c) Product Research

Afternoon: Tour of refinery, laboratory and lubrication plant.

Evening: Flight to Calgary.

Friday, April 26

Forenoon: Visit to the research laboratory where the following were discussed:

- (a) Research and Technical Service
- (b) Chemistry and Petroleum Productions
- (c) Exploration Geophysics
- (d) Muskeg in Northern Canada
- (e) Corrosion in Oil Production
- (f) Corrosion Demonstrations

Afternoon: Conference and Panel Discussion—An evaluation of the seminar.

Evening: Return Flight to Edmonton.

Outcomes

The final session on Friday afternoon attempted to evaluate the outcomes of the seminar to the participating teachers. It was generally agreed that the following were some of the outcomes:

1. It was instructional to teachers in that it provided up-to-date information not found in textbooks, and broadened the teachers' background and understanding of many aspects of science.
2. It was a challenge to science teachers to keep up-to-date in their professional knowledge and methods.
3. It demonstrated the value of cooperation between industry and education and of how industry can be of assistance to teachers.
4. It pointed up ways in which teachers, through a better understanding of the personnel needs of industry, could give better guidance to students.
5. It was emphasized that students need a good understanding of basis science principles, and that much of the material presented and discussed would serve as illustrations of the application of science.

Suggestions for Further Action:

1. Consideration was given to means whereby the results of the seminar might be passed on to other science teachers. It was agreed that this could be done through group meetings, institutes, articles in the A.T.A. magazine, etc.
2. It was suggested that a survey be made at a later date to determine the extent to which participation in the seminar had influenced the teaching of science by members of the group.
3. It was recommended that further seminars of this kind be planned in the future.
4. It was suggested that further cooperation by industry with education might include summer employment of science teachers and students to familiarize them even further with the application of science to industry.

A SURVEY OF THE PROBLEMS OF ADOLESCENT HIGH SCHOOL GIRLS FOURTEEN TO EIGHTEEN YEARS OF AGE

ADA LENT

*Victoria Composite High School
Edmonton*

The Nature and Extent of the Problem

The period of adolescence is not the happy, carefree age it is frequently supposed to be. On the contrary, it is often characterized by problems and responsibilities centering about home life, school experiences, and social relationships. There is a constant struggle for security, acceptance and status, and many adolescents find it extremely difficult to cope with obstacles which must be overcome to satisfy these needs. While behavior arising as a result of adolescent needs is definitely conditioned by the home¹, life at school and relationships with teachers and peers also have a profound psychological impact on the youth's way of life.²

Authorities³ state that by the time the child reaches school age, serious maladjustments seldom result unless he is so predisposed. They say, however, that while school is seldom the direct or chief cause of difficulty, it may be a precipitating factor. Because of the strain in making new adjustments, the first signs of trouble may appear on first entering school, or upon entrance to high school.

The incidence of maladjustment among school children has been the subject of extensive investigation. The findings of three recent English surveys⁴ suggest that about one per cent of school children need treatment in any one year. The White House Conference on Child Health and Protection⁵ revealed that one of every eight children is poorly adjusted, and that in a classroom of thirty, there are at least three children with severe emotional problems. Other studies⁶ estimate that one out of twenty of our present school population is destined to spend some time in a mental hospital, and that one out of thirteen is in need of special help and consideration.

Purpose of the Survey and the Sample Used

This survey of the problems of adolescent high school girls was carried out in connection with the guidance and counseling program of a large composite senior high school in the city of Edmonton. The main purpose of the survey was to determine the number, type, and

¹August B. Hollinshead, *Elmtown's Youth*, p. 441.

²Arthur T. Jersild, *In Search of Self*, p. 7.

³Ministry of Education, *The Report of the Committee on Maladjusted Children*, p. 32.

distribution of problems of each age group from fourteen to eighteen years of age. A further purpose was to evaluate the survey instrument as a group screening device.

The sample used in the survey consisted of 425 girls, selected on the basis of age and availability. Of these girls, 100 were fourteen years of age, and were obtained from junior high school; 100 were fifteen, 100 were sixteen, 89 were seventeen, and 36 were eighteen years of age. It was expected that this group would provide a sufficiently representative sample to permit an insight into the problems typical of girls of these ages.

Adolescent Problems in Terms of Behavior

For the purpose of the survey, the psychological interpretation of behavior from the personality theories of Lecky⁷, Allport⁸, Rotter⁹, and Bell¹⁰, was used as the basis for the definition of a problem. Accordingly the individual's behavior is held to reflect the relationship between the demands of the self and the demands of the situation, and is an attempt to adapt to these internal and external demands. A problem is that situation which is significant to the individual, but for which a satisfying solution is difficult or impossible to achieve. These situations are psychological barriers which have their origin in earlier childhood, in the immediate past, or in present experiences. It is assumed that emotional disturbance or conflict, arising as a result of these blocks, is expressed or revealed in the kind and quality of behavior, and that the conflict is subject to detection and interpretation.

The Survey Instrument

Projective techniques, represented by such methods as interpretation of ink-blots, pictures, role-playing, word-association, and sentence completion, are considered to be effective means of gaining insight into underlying causes of behavior. Rotter's Incomplete Sentences Blank, High School Form, (ISB), selected for use in the survey, is essential by a projective technique, utilizing free association of ideas. In response to sentence beginnings, the subject inadvertently reveals his true self, since there is no way in which he can anticipate the significance of the answers. In this, as in other projective devices, it is assumed that the subject reflects his own wishes, desires, fears, and attitudes in the sentences he completes.

⁴Ibid., p. 171.

⁵White House Conference on Child Health and Protection, p. 101.

⁶Harold W. Bernard, *Mental Hygiene for Classroom Teachers*, p. 7.

⁷Prescott Lecky, *Self-Consistency: A Theory of Personality*, 1945.

⁸Gordon W. Allport, *Personality: A Psychological Interpretation*, 1937.

⁹Julian B. Rotter, *Social Learning and Clinical Psychology*, 1954.

¹⁰J. E. Bell, *Projective Techniques: A Dynamic Approach to the Study of Personality*, 1948.

The ISB¹¹ consists of forty stems printed on both sides of a single sheet, with suitable spaces for completions. Administration to a large group is relatively easy, requires no special training, and results in no apparent loss in validity. Individual administration is possible, and once started, the subject can complete the test without supervision. In this survey, the ISB blanks were administered by classroom teachers. The time required was about forty minutes, and for convenience in administration, classes composed entirely of girls were used wherever possible. A few of the blanks were individually administered.

Problem Recognition, Interpretation, and Classification

As a basis for problem recognition, Rotter's explanation of conflict and the nature of conflictive behavior was relied upon. Problems found in the completions were classified in eleven categories. Ten of these, developed from the Mooney Problem Check Lists¹², were taken from a pilot survey. One further category was added to cover problems indicative of escape tendency.

To use the classification scheme, it was necessary to recognize the typical responses indicative of conflict, and to interpret their meaning in order to determine the category to which the response should be referred. For this purpose, typical completions were selected as sample categorizations from completions in a pilot survey, and from those supplied in the Rotter manual.¹³ The task of categorization then became the matching of conflict responses with those assigned as typical of each category.

Reliability and Validity

Since the use made of the ISB in this survey was not that for which it was designed, the reliability of the classification had to be established. Reliability depended on: (1) objectivity and consistency in interpretation of completions, (2) accuracy in categorization of problems, and (3) stability of the subjects' responses. These reliabilities were secured by obtaining inter-scorer agreement of three examiners, intra-scorer agreement of the writer only, and test-retest of eighty subjects not included in the survey.

The inter-scorer reliability, based on total problems categorized from completions on fifty blanks by one examiner, and recategorized from the same fifty blanks by the writer, was 62.3 per cent. Intra-scorer reliability, based on total problems from classification and reclassification of another set of fifty blanks, was 97.0 per cent. Reliability of the subjects' responses, scored by the writer, was 90.0 per cent. Validity was based on rapport between the subjects

¹¹Julian B. Rotter, *Incomplete Sentences Blank, High School Form*, 1950.

¹²Ross L. Mooney, and Leonard V. Gordon, *The Mooney Problem Check Lists*, 1950.

and the teachers who administered the blanks, and on known problems of many of the subjects.

Survey Findings

The ISB completions showed that the bulk of problems was experienced in four areas: Personal-Psychological, Study-Learning, Social-Psychological and Home-Family Relationships. The remaining categories showed decreasing numbers of problems, and definite age trends were apparent. Comparison of the percentage of problems found in each category for the total group of 425 girls is shown in Table I.

TABLE I
PERCENTAGE OF PROBLEMS IN EACH CATEGORY:
TOTAL GROUP

Category	Per Cent
Personal-Psychological	24.6
Study-Learning	21.6
Social-Psychological	12.8
Home-Family	10.3
Health	7.6
Heterosexual Relationships	6.9
The Future	5.7
Economics	4.2
Social Recreational	3.6
Morals and Religion	2.2
Escapist—Unrealistic—Fantasy Tendency	1.3

Nearly one-quarter, or 24.6 per cent, of the problems for the entire group were Personal-Psychological; over one-fifth, or 21.6 per cent were Study-Learning; over one-eighth, or 12.8 per cent were Social-Psychological, and over one-tenth, or 10.3 per cent were Home-Family problems. This table demonstrates the striking difference in size between the first two categories, Personal-Psychological and Study-Learning, and the other nine which made up the complete set of eleven categories used for problem categorization.

Table II presents the percentage of problems in each category for the total group, and for each age group. A distinctive feature of this table is a definite pattern in the arrangement of categories for all age groups, with the most important problem areas in Group I, and those of lesser importance in Group II and Group III. A second distinctive feature of the table is the definite age trend in the problem distribution of the first two categories of Group 1. The Personal-Psychological category indicates a sharp upward trend in

¹³Julian B. Rotter, and Janet E. Raferty, Manual, *The Rotter Incomplete Sentences Blank, College Form*, 1950.

personal problems, from 19.6 per cent at fourteen years, to 35.2 per cent at eighteen years of age, while during the same period the Study-Learning category shows a decline in school problems, from 25.8 percent at the fourteen year level, to 16.6 per cent at eighteen years of age.

TABLE II

GROUPING OF CATEGORIES OF PROBLEMS IN ORDER OF IMPORTANCE

Category Groups	Categories	% of Total Group	Percentage of Problems in Each Category				
			14 Years	15 Years	16 Years	17 Years	18 Years
I	Personal-Psychological	24.6	19.6	23.1	23.8	26.9	35.2
	Study-Learning	21.6	25.8	26.5	19.5	17.3	16.6
	Social-Psychological	12.8	15.1	11.5	11.8	11.8	15.5
	Home-Family Relationships	10.3	11.2	10.8	9.9	11.0	7.9
II	Health	7.6	9.0	8.8	5.9	7.9	5.1
	Heterosexual-Relationships	6.9	3.0	3.5	9.4	7.3	6.5
	The Future	5.7	6.4	4.5	7.0	4.4	6.2
	Economic	4.2	4.0	5.3	4.2	4.3	2.5
III	Social-Recreational	3.6	4.0	3.7	4.1	3.2	1.3
	Morals and Religion	2.2	.9	1.8	3.1	3.1	1.7
	Escapist-Unrealistic-Fantasy Tendency	1.3	.9	.6	1.0	2.3	1.6
N=425		100.8	99.9	99.9	99.7	99.5	100.1

TABLE III

PERCENTAGE OF PROBLEMS IN THE PERSONAL-PSYCHOLOGICAL CATEGORY ON AN AGE BASIS

Age	Per Cent
Fourteen	19.6
Fifteen	23.1
Sixteen	23.8
Seventeen	26.9
Eighteen	35.2

Of the eleven categories employed in the survey, the Personal-Psychological is the most distinctive. Not only does it contain the largest percentage of problems, but it stands first in importance for the three older groups, and second in importance for the two younger groups. Table III presents a comparison of the percentage

of personal problems for the five age groups. The marked increase at eighteen years of age may be the result of the small sample. However, the increase in the problems in this category during the previous years give no reason to expect a change in direction.

The area of personal adjustment, in which difficulties directly affecting mental and emotional health are likely to appear, was planned to include problems expressing self-criticism, feeling of inferiority and of not being wanted, overconcern with the problems of others, withdrawal, regret about the past, or unsatisfactory comparison relating to the past, and fears of a general nature. Problems of this type are not unusual during adolescence, but that they assume a position of such moment, and increase in importance with age is a valuable finding, and points to the fact that advance toward maturity and increasing freedom from problems of personal adjustment do not go together.

Problems assigned to this category were found in completions such as, "I . . . am very lonely sometimes." "People . . . misunderstand me." "I . . . have few friends." "wish I were happy all the time;" "am moody;" "feel restless;" "am easily hurt;" "am depressed." "I feel . . . sorry for unfortunate people;" "not wanted;" "inferior." "I wish I were dead; had never been born." My greatest fear . . . is war; fire; wind; death."

It might be expected that intellectual handicap would be related to personal and social adjustment. However, Conrad et al¹⁴ found that intelligence offers little or no prediction of the quality of adjustment. In a study of self-concepts of boys and girls in junior high schools, Taschuk¹⁵ found no significant relationship between intelligence and self-acceptance.

If this method of obtaining problems is assumed to be valid and reliable, the size of the personal problems category should be of concern to those dealing with adolescents in the high school, since preoccupation with these problems directly affects satisfactory school achievement. Its importance is again emphasized when the close relationship of personal adjustment problems to poor mental health is realized. Attention was drawn earlier to the incidence of maladjustment among school children. The findings of this survey appear to support these figures.

The distribution of Study-Learning problems is shown in Table IV. The distinct and fairly rapid decrease in percentage of problems from 25.8 per cent at fourteen years to 16.6 per cent at eighteen years is a satisfying finding, and is in line with the expected growth in the student's ability to choose courses more nearly suited to

¹⁴National Society for the Study of Education, pp. 165-181.

¹⁵W. A. Taschuk, *The Alberta Journal of Educational Research*, p. 102.

TABLE IV

PERCENTAGE OF PROBLEMS IN THE STUDY-LEARNING CATEGORY ON AN AGE BASIS

Age	Per Cent
Fourteen	25.8
Fifteen	26.5
Sixteen	19.5
Seventeen	17.3
Eighteen	16.6

capacity and need. However, the percentage of these problems at all ages is still large. The conspicuous place given to them should be of significance to school personnel, and should draw attention to the need for guidance, particularly at fourteen and fifteen years of age. Timely assistance would tend to lessen the incidence of failure in the school. It might help to reduce the number of problems in the Personal-Psychological area, to which generalized failure is referred.

The Social-Psychological category, presented in Table V, included attitudes and feelings toward others as expressed in criticism and dislike of people, their intentions and their actions. These attitudes were found in completions such as, "People . . . are nicest when they want something from you." "What annoys me . . . are snobbish people." "I . . . hate people." This category is closely associated with the Personal-Psychological category, since the person who is critical of others is likely to set a low value on himself¹⁶. Taschuk¹⁷ found a highly significant relationship between the areas of the social and personal aspects of self.

TABLE V

PERCENTAGE OF PROBLEMS IN THE SOCIAL-PSYCHOLOGICAL CATEGORY ON AN AGE BASIS

Age	Per Cent
Fourteen	15.1
Fifteen	11.5
Sixteen	11.8
Seventeen	11.8
Eighteen	15.5

¹⁶Arthur T. Jersild, *In Search of Self*, p. 46.

¹⁷W. T. Taschuk, *op. cit.*, p. 102.

Third in importance among eleven problem areas, the Social-Psychological category represents the difficult task of socialization. Since it is closely related to the Personal-Psychological category, the problem distribution might have been expected to follow a similar trend, but this was not found to be so. However, its importance should not be minimized as a problem source, since many of the difficulties and failures experienced may be felt more keenly as personal problems, with resulting increase in the Personal-Psychological category. It is also important to note that there is no decrease in the incidence of problems as the girls grow older.

The Home-Family Relationships category is shown in Table VI. Problems here were found in completions such as, "A mother does not know how you feel:" "sometimes does not understand her child:" "should give equal affection to each child." "My father is disagreeable;" "never at home;" "does not live at home;" "is dead;" "is mean;" "won't let me choose my friends."

TABLE VI
PERCENTAGE OF PROBLEMS IN THE HOME-FAMILY
RELATIONSHIPS CATEGORY ON AN AGE BASIS

Age	Per Cent
Fourteen	11.2
Fifteen	10.8
Sixteen	9.9
Seventeen	11.0
Eighteen	7.9

The steady decline from 11.2 per cent at fourteen years, to 7.9 percent at eighteen years of age may be important. The deviation from this general trend at seventeen years may not indicate anything of note, although a study by Ivins et al ¹⁸ found that both boys and girls of seventeen year of age exhibited excessive emotional instability. The home is also considered by most authorities to be a potent problem source, but because of its very familiarity the individual is likely to place the blame for home difficulties elsewhere.

The Heterosexual Relationships category, with an over-all increase from 3.0 per cent to 6.5 per cent, is shown in Table VIII.

In view of the emphasis placed upon problems of heterosexual adjustment in the literature dealing with adolescent development, the small size of this category was somewhat unexpected. However, this area is part of the larger area of general socialization, and

¹⁸William H. Ivins, William H. Fox, and David Segel, *A Study of a Secondary School Program in Light of Characteristics and Needs of Youth*, p. 19.

TABLE VII
PERCENTAGE OF PROBLEMS IN THE HETEROSEXUAL
RELATIONS CATEGORY ON AN AGE BASIS

Age	Per Cent
Fourteen	3.0
Fifteen	3.5
Sixteen	9.4
Seventeen	7.3
Eighteen	6.5

problems experienced may have both social and personal repercussions. If this is so, these problems serve to increase the importance of both the Social-Psychological and the Personal-Psychological categories, and do not appear in the category in which they originated. The reader is also reminded that size of category is not a good measure of the intensity of difficulty. Even one problem of a serious nature may hold greater implications for individual adjustment than would many problems with less personal meaning, since pain is always referred to the self.¹⁹

Because of the small percentage of problems in Group III categories, definite age trends were not clear. These categories were considered to be more value in individual counseling than for the group. This is particularly so in the case of the eleventh category, Escapist-Unrealistic-Fantasy Tendency. Completions indicative of a tendency to escape were found in such expressions as, "My mind . . . wanders too much"; ". . . is full of hopeless dreams"; ". . . is always thinking of something else." "I . . . daydream all the time"; ". . . can't concentrate"; ". . . want to get away"; ". . . wish I were far away."

Summary and Conclusions

This survey investigated, by means of the Rotter Incomplete Sentences Blank, High School Form (ISB), the number, type, and distribution of the problems of 425 adolescent high school girls, fourteen to eighteen years of age, who were attending Edmonton high schools. The subjects were selected on the basis of age and availability.

The problems found in the completions were interpreted on the basis of Rotter's explanation of conflict, and were classified by two examiners and the writer in eleven categories. Reliability of the classification scheme was established on the basis of inter-scorer and intra-scoror agreement, and test-retest of eighty subjects not

¹⁹Gordon W. Allport, *Personality: A Psychological Interpretation*, p. 164.

included in the survey. Validity was judged on the basis of rapport between the subjects and the teachers who administered the ISB, and on known problems of many of the subjects.

The findings revealed important problem areas, and definite age trends in problem distribution. The four most outstanding problem areas were: Personal-Psychological, Study-Learning, Social-Psychological, and Home-Family Relationships. Distinctive age trends in problem distribution were revealed for the first two, and less definite trends for the latter two areas. Over two-thirds, or 69.3 per cent of the problems for the entire group were found in these four categories,

The most prominent category, in both size and distribution, was the Personal-Psychological. It contained the largest percentage of problems for the three older groups, and the second largest for the two younger groups, and showed a rapid rise from fourteen to eighteen years of age. The Study-Learning category showed the opposite trend. The Social-Psychological category was less distinctive and showed no decrease, while the home diminished as a problem source. The Heterosexual Relationships category was not as prominent as might have been expected, though these problems, which are part of the larger task of socialization, may have repercussions in the personal and social areas.

The falling-off with age of frequency of problems in the Study-Learning category is reassuring, though frequency is still substantial. This finding is supported by results of other problem surveys in which the school stands high on the list of problem areas.

The one finding which was both startling and distributing was that revealed in the Personal-Psychological category. This area is the one in which difficulties directly affecting mental health are likely to appear. It has been suggested that the extent of maladjustment among adolescents in high school is more serious than most teachers realize, and the findings of the survey appear to support this view.

The number of problems in any given area is not necessarily an index of their seriousness. One problem expressed by the individual may be of greater moment to him than many problems for another. For this reason, the smaller categories, especially Morals and Religion and Escapist-Unrealistic-Fantasy Tendency, were considered to be important for individual use. These, and the largest category, Personal-Psychological, were considered to be most closely related to mental health.

Much external evidence confirms the accuracy of these findings for the population concerned. There is no reason to doubt their

applicability to similarly envired girls everywhere of ages fourteen to eighteen.

Rotter's Incomplete Sentence Blank seems a practical instrument for revealing both group and individual problems. But it should be supplemented by all available information from the other sources; and its effectiveness is relative to the competence of the user in interpreting the sentence completions.

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THE SELF IN INTERPERSONAL THEORY: THE RELATIONSHIP BETWEEN ATTITUDES REFERRING TO SELF AND SIGNIFICANT OTHERS

ALAN F. BROWN
Kellogg Fellow
Faculty of Education
University of Alberta

Because personality theory has a direct influence on methods of counselling used in our schools, it is not surprising to find educators interested in personality research. Research support for different theories of personality has been established. One general theory of personality, barely in its infancy, the theory of interpersonal relations, is enjoying increasing application in counselling and clinical practice where research has demonstrated its utility. Research support for its fundamental postulates remain scant. Providing support for one of the premises basic to interpersonal theory was the problem of this study.

The Study

The problem was delimited by examining the definitions of personality, of self and of significant others used by interpersonal theory. It was recognized that most essential to the theory was the hypothesis that one's attitudes referring to self are correlated with one's attitudes referring to others. Testing this hypothesis, and two related hypotheses, was the aim of this study.

Theoretical Setting

Harry Stack Sullivan, whose studies are basic to interpersonal theory, has defined personality as "the relatively enduring pattern of interpersonal situations which characterize a human life."¹ The word 'pattern' refers to the containing manifold of insignificant differences in interpersonal processes. Significant differences may and do occur. When they do, the construct is affected and the result is normally referred to as a personality change. The interpersonal situations are successive events in which the self interacts with other persons, particularly with those individual other persons who have had the most significant effect on the development of the self. The self-conceptualization process is based on successive conceptualizations of these significant others. Stated otherwise one's self-concept is a function of one's concepts of the persons most important to him.

In brief, the interpersonal theory of personality hypothesizes a

¹Harry Stack Sullivan, *Conceptions of Modern Psychiatry*, p. vi.

system of interpersonal processes, the locus of which system is the self. This relationship between the individual and his environment of significant other-figures emerges as the postulation most essential to the general theory. Accordingly, it constitutes the hypothesis in most immediate need of investigation.

Three Hypotheses

The investigation was begun by enunciating one basic hypothesis and two related hypotheses.

Hypothesis One: Grade nine pupils' attitudes of dominance-submissiveness used in describing the self are correlated with their dominance-submissiveness attitudes describing individual other persons.

Hypothesis Two: The correlation between attitudes toward self and attitudes toward peers is not significantly different from the correlation between attitudes toward self and attitudes toward adults.

Hypothesis Three: Grade nine boys and grade nine girls do not differ in the degree to which their self-attitudes are correlated with their attitudes toward others.

Preparation of the Instrument

In order to test the foregoing experimental hypothesis an instrument was required which would fulfill certain conditions: (1) The instrument used for quantifying attitudes toward self must be the same as the one used in quantifying attitudes toward others so that the relationship between the two might be investigated. (2) The instrument must permit statistical comparison. (3) All items of the instrument must lie within the dominance-submissiveness continuum. (4) The instrument must not be too difficult for a sample of grade nine students; the results must be as free as possible from contaminating factors of intelligence and reading ability. (5) It must include an adequate representation of the subject's significant others. (6) It must contain some estimate of the relative significance of each other-figure to the subject. (7) The other-figures must be measured separately. (8) it must be short enough to be administered in the time available—one classroom period. (9) It must contain no feature which might provoke adverse reactions from the subjects, their parents or their teachers. It was decided that an instrument which would contain a set of attitude scales could best meet these conditions.

The Attitude Scale

Of the three most widely used methods of attitude scaling, the Guttman method has failed to impress the critics. One comment

from the literature is typical: "... the writers feel that several basic flaws in the method are apparent and that an attitude of suspicion toward the general application of the technique is justified."² Referring to the remaining two methods, Thurstone and Likert type scales, McNemar writes, "Both methods have merits, and both have defects which might be overcome by a combination of the two."³ He suggests that either technique will yield a more reliable scale when it embodies a feature of the other method: a Thurstone scale purified by internal consistency tests and using a forced choice response, or a Likert scale using items selected according to the ratings of competent judges. The instrument developed in this study was of the latter form.

Collecting Items

As many published tests claiming to contain dominance-submissiveness items as could be located were examined. A total of 130 items was collected from these sources which included the Interpersonal Check List, Pinter's Aspects of Personality, Guilford-Martin Factors GAMIN and the Bernreuter Personality Inventory. Each item was changed into a descriptive attitude statement as required by hypothesis one. Some items which lost their meaning when applied to both self and others were discarded. Items showing restricted application, duplicate items and ambiguous items were also discarded.

Editing Items

Six adults, selected because of their contact with and understanding of junior high school children, their familiarity with test construction and their knowledge and standards of English usage, were asked to edit the remaining seventy-two items. Each editor was asked to consider every statement with reference to boys and girls of about fifteen years of age who would use the statements in describing other persons and themselves. Following the recommendations of the editors, eight items were discarded or included in other items, and changes were made in many more.

Logical Validation

This step attempted to determine which of the remaining sixty-four items were most valid, considering that their purpose was to elicit an attitude on dominant or submissive behavior. Twenty

²K. E. Clark and P. H. Kriedt, "An Application of Guttman's New Scaling Techniques to an Attitude Questionnaire," *Educational and Psychological Measurement* (1948), p. 221. See also: A. L. Edwards and F. P. Kilpatrick, "A Technique for the Construction of Attitude Scales," *Journal of Applied Psychology* (1948) and P. H. Kriedt and K. E. Clark, "Item Analysis vs. Scale Analysis," *Journal of Applied Psychology* (1949).

³Quinn McNemar, "Opinion-Attitude Methodology," *Psychological Bulletin* (1946), p. 308.

adults rated each item as satisfactory, very satisfactory or unsatisfactory according to how well it could be expected to elicit the attitude under consideration. Definitions of dominance and submissiveness were deliberately omitted from the instructions. It was expected that the judges, who in their training and experience had been able to develop a concept of dominant behavior and its opposite, would rate the items accordingly. Their ratings were assigned values of two for very satisfactory, one for satisfactory and zero for unsatisfactory. From their summed ratings twenty-four items were discarded because of low validity, two were discarded because of overlap and six were discarded because of their demands on ability to draw inferences.

Length of the Test

A small sub-study was carried out for the purpose of learning how many scales a subject could be expected to complete in a thirty-five minute classroom period. The test contained twenty-two items picked at random on which the subject rated each of ten self-selected peers, four adults specified by role, one self-selected adult and himself. It was found that after they had mastered the instructions the subjects required approximately two and one-half minutes to complete each scale. From this finding, and from a later discussion with the six grade nine volunteers who participated in the sub-study, it was decided that the final test would contain eight similar scales on which to rate each of four self-selected peers, three self-selected adults and the self. This number allowed ten minutes for instruction, which were to be more complex in the final test, and five extra minutes for the slower respondent.

Internal Consistency

To ensure the uni-dimensionality of the scale the test of internal consistency was applied. For a scale to be internally consistent each item score must show a positive and significant correlation with the full scale score. In early April, 1957, seventy-five pupils, the entire grade nine class at an urban junior high school, responded to an attitude scale which contained the thirty-two items surviving the logical validation phase. The subjects rated self only, the assumption being that if all items fell, or failed to fall, within one continuum when the self was being rated, the same would be true when others were rated. Hence each statement began with the personal pronoun "I". In accordance with the Likert method of attitude scaling, half the items were positive (dominance statements) and half were negative (submissiveness statements) arranged in random sequence. Each item was followed by five response categories, one of which the subject must be select. In this test the subject was

to circle SA, A, U, D or SD, to indicate that he strongly agreed, agreed, was undecided, disagreed or strongly disagreed with the statement in describing himself. The items were scored by assigning values of five, four, three, two and one to the response categories for dominance items; values of the reverse order for submissiveness items. The full scale score was the sum of the item scores.

In the thirty-two item scale, the items vs. full scale correlations ranged from $-.01$ to $.51$. Nine dominance items and ten submissiveness items yielded correlations significant at the $.01$ level of confidence. The number of items to be retained in the final test was fixed at twenty: all those which yielded significant correlations in the first test of internal consistency and one item which was somewhat less consistent (significant at the $.05$ level) with the thirty-two item full scale.

It was next necessary to learn whether a scale composed of the retained twenty items would be internally consistent. For this purpose the scores of the twenty retained items were correlated with full scale scores obtained by summing the scores of the retained items only. In this second test of internal consistency, correlations ranged from $.30$ to $.54$. That all were significant at the $.01$ level demonstrates the fulfilment of the internal consistency requirement.

Reliability

To compute a coefficient of reliability the results of the early April testing were again used. The full scale scores based on the retained twenty items were correlated with full scale scores on the same items obtained from a retest exactly one week later with forty-three of the original subjects. The coefficient of test-retest reliability (coefficient of stability) thus obtained was $.91 \pm .03$, indicating that the scale possesses a high degree of reliability.

Significance of 'Others'

In a respondent's repertory of significant others some persons will be very close to him, some will be more distant. To determine the relative degree of significance to the respondent of each other-figure selected the subject was asked to place in rank-order the persons selected according to how important a role each played in his life. Space for this purpose was provided on the instruction page in the final form of the instrument.

Public Relations

Asking a school child to state whether his mother is domineering, his father seldom talks back or his teacher is a weak spineless person, could provoke embarrassing reactions. Mother, father and teacher are definitely significant others in a grade nine student's interperson-

al world and their inclusion as specified roles would enhance this piece of research. However, for the necessary and practical consideration of public relations the following steps were taken: (1) All other persons whom the respondent would rate would be self-selected by the respondent and identified on his paper by whatever symbol he chose: name, nickname, initials or other symbol. (2) All test papers would be anonymously answered; their anonymity would be assured by the examiner, a person in good rapport with the respondents. (3) The test would not be administered in a residential area in which there had been previous public relations difficulties. (4) Permission to use the tests in city schools would be obtained from the administrative offices of the school system.

The Interpersonal Attitude Scale (Form D-S)

In its final form the instrument used for testing the hypotheses stated earlier was referred to as the Interpersonal Attitude Scale (Form D-S) or by the abbreviation, IAS. It contained instructions to the examiner, directions for the subject, a space for the selection and identification of other-figures, and eight test pages. On each of these pages was printed an attitude scale composed of the twenty retained items. Each item was followed by the response categories, SA, A, U, D and CD. The subject was asked to rate his three selected adults, four selected peers and himself on one scale each. All statements began with "this person" excepting those on the last page where they began with "I". The statements read as follows:

1. This person likes to tell others what to do.
2. This person is a "follower" in a group.
3. This person takes on responsibility easily.
4. This person is domineering, likes to control others.
5. This person belittles himself, "runs himself down" before others.
7. This person competes with others.
8. This person seldom talks back.
9. This person is easily led.
10. This person is not afraid to say "No" to others.
11. This person is a weak or spineless person.
12. This person acts shy or timid with others.
13. This person lets others "walk all over him".
14. This person leads in a group without showing fear.
15. This person wants to manage other people.
16. This person appears meek or humble.
17. This person acts with self-confidence.
18. This person obeys others willingly.
19. This person usually gives in to others.
20. This person is often giving advice.

Testing Hypotheses

Administration

The IAS was administered to 101 grade nine pupils of both sexes in two urban junior high schools. Fifty-two respondents identified themselves as boys, forty-four as girls, a distribution which is not significantly different ($p = .50$ approximately) from an equal number of each sex. Five failed to indicate their sex. The age distribution showed a median age of fifteen years, four months, and the age range was from 12-1 to 18-3. Testing was carried out between May 24 and May 28, 1957, by examiners who by this time knew the examinees well.

Analyzing the Data

The respondent's full scale score on the final page of the test, eliciting attitudes toward self, was used as the independent variable. Against it were correlated these dependent variables: (1) the score on the first scale in the test (attitudes referring to most significant peer), (2) the score on the fifth scale in the test (attitude referring to most significant adult), (3) the average of scores on the first four scales in the test (attitudes referring to four significant peers), (4) the average of scores on the fifth, sixth and seventh scales in the test (attitudes referring to three significant adults), and (5) the average of scores on the first seven scales in the test (attitudes referring to all significant other-figures selected by the respondent).

Sex differences were investigated using the same variables listed in the foregoing paragraph. The boy's papers were separated from the girls' papers and correlations were computed within each sex as though they were two separate populations.

Coefficients of correlation were computed by the Pearson product-moment method. Before using this method it is an accepted practice that the trait under consideration be established as a continuum, normally distributed in a given population. The distributions of scores on each of the six variables described above were tested for normalcy with two measures, skewness and kurtosis. It must be noted that the items of the IAS, a Likert type scale, are not previously normalized or scaled as the Thurstone and Guttman methods. Testing the significance of difference between the obtained skewness and normal skewness revealed that four distributions failed to exhibit a significant departure from normalcy. Significant skewness was apparent in the respondent's attitudes referring to all adults, and there was a tendency ($p = .08$) for respondents' self attitudes to be positively skewed. None of the distributions exhibited a significant deviation from normal kurtosis. These data are presented in Table 1. In summary, it may be assumed that among

101 grade nine pupils tested on the IAS, attitudes of dominance-submissiveness toward self and toward others closely approach a normal distribution.

TABLE I
RELIABILITY OF MEASURES OF SKEWNESS AND KURTOSIS
IN DISTRIBUTIONS OF DOMINANCE-SUBMISSIVENESS
ATTITUDES

Measures	Subjects' Attitudes Referring to:					
	Self	Peer No. 1	Adult No. 1	Avg. All Peers	Avg. All Adults	Avg. All Others
Normal Sk.	0	0	0	0	0	0
Obtained Sk.	+1.78	-0.04	+1.06	+0.43	+2.04	+0.39
SE _{Sk}	1.01	0.96	1.15	0.68	0.79	0.58
Critical Ratio	1.76*	0.04	0.92	0.63	2.58*	0.67
Normal Ku.	.263	.263	.263	.263	.263	.263
Obtained Ku.	.246	.266	.226	.258	.268	.266
SE _{Ku}	.028	.028	.028	.028	.028	.028
Critical Ratio	.61	.11	1.32	.18	.18	.11

*Fiducial limits for $df = 100$: .05 level = 1.98; .01 level = 2.63

The Hypotheses Discussed

Hypothesis one states that grade nine pupils' attitudes of dominance-submissiveness used in describing the self are correlated with their dominance-submissiveness attitudes used in reference to others. Table 2 indicates positive correlation coefficients between the independent variable and each of the five dependent variables which depart from zero correlation to a degree which could be attributed to chance factors alone in fewer than one per cent of trials. Hypothesis one is therefore supported. The data indicate that, in an incidental sample of 101 grade nine pupils, those who regard themselves as dominant persons tend also to regard others of their interpersonal environment as dominant. Conversely, those who regard themselves as submissive tend to consider others submissive.

Hypothesis two states that the correlation between attitudes to self and attitudes to peers is not significantly different from the correlation between attitudes to self and attitudes to adults. Testing the significance of difference between correlation coefficients requires the use of Fisher's z -transformation. In a sample of 101 subjects a z -difference of .28 is necessary to be significant at the .05 level. Table 2 indicates that the z -difference between All Peers and All Adults variables is .06. That both differences fall far short of obtaining significance supports hypothesis two. The implication is that adolescents tend to associate their self-conceptualizations

with their concepts of several other persons close to them, whether these persons are peers or adults.

Hypothesis three states that boys and girls do not differ in the degree to which their self-attitudes are correlated with their attitudes referring to other persons. Table 3 indicates *z*-differences between the sexes from .09 (Peer No. 1 variable) to .23 (Adult No. 1 variable). Because of the reduced number in each sample ($N_{\text{boys}} = 52$, $N_{\text{girls}} = 55$), a *z*-difference of .41 is required for the obtained difference to be significant at the .05 level. Obtained *z*-differences fall short of this requirement. The critical ratio of the largest sex difference was calculated at 1.10 indicating that a difference that great could occur in twenty-seven per cent of trials owing to chance

TABLE II
CORRELATIONS BETWEEN ATTITUDES TOWARD SELF
AND ATTITUDES TOWARD OTHERS AMONG
101 GRADE NINE PUPILS

y-variable	x-variable	r_{xy}	<i>z</i> - transformation
Attitudes toward:	Attitudes toward:		
1. Self	Peer No. 1	.32 ^a	.33 ^b
2. Self	Adult No. 1	.31	.32
3. Self	All Peers (averaged)	.33	.34
4. Self	All Adults (averaged)	.38	.40
5. Self	All Other-figures (averaged)	.44	.47

^aAll *r*'s are positive and significant at the .01 level.
^bA difference between *z*'s of .28 is required for significance at the .05 level.

TABLE III
DIFFERENCES BETWEEN 52 GRADE NINE BOYS AND 44
GRADE NINE GIRLS WITH RESPECT TO ATTITUDES
TOWARD SELF AND OTHERS

y-variable	x-variables	r_{xy} Boys	r_{xy} Girls	<i>r</i> - Diff.	<i>z</i> - Diff.*
Attitudes toward:	Attitudes toward:				
1. Self	Peer No. 1	.34	.25	.09	.09
2. Self	Adult No. 1	.37	.16	.21	.23
3. Self	All Peers (averaged)	.39	.29	.09	.10
4. Self	All Adults (averaged)	.56	.45	.11	.15
5. Self	All Other-figures (avgd.)	.48	.29	.19	.22

*A *z*-difference of .35 is required for significance at the .10 level, or .41 at the .05 level.

operations. Inspection of Table 3 indicates that all differences are in one direction: boys' papers yielded consistently higher correlations than girls'. When the significance of difference in one direction only, or the significance of the superiority of one measure over another, was tested, it was found that chance factors could account for the obtained difference in the direction of boys' correlations in more than thirteen per cent of trials. Notwithstanding the observed sex differences, these findings provide convincing support for hypothesis three.

Conclusion

This study was set within the general problem of finding research support for the clinically validated interpersonal relations theory of personality. A measure of support was accorded to the one premise recognized as most essential to the theory. This was accomplished by enunciating three hypotheses and testing them with an instrument developed for that purpose. Because each of the hypotheses was supported the conclusions drawn from this study are a restatement of these hypotheses:

1. Grade nine pupils' attitudes of dominance-submissiveness used in describing the self are positively and significantly correlated with their dominance-submissiveness attitudes describing certain other persons most significant to them.
2. Grade nine pupils associate their self-attitudes with their attitudes referring to peers to the same degree as they associate their self-attitudes with their attitudes referring to adults.
3. Grade nine boys and grade nine girls do not differ significantly in the degree to which their self-attitudes are associated with their attitudes referring to others.

Not only more research but also more theoretical formulation is indicated to solve some of the problems of personality psychology raised by this study. Some of the questions this study begs would read: Could some factor other than chance have accounted for the persistent though non-significant sex difference in the direction of boys' correlations? The greater magnitude of boy's correlations was most evident within the Adult No. 1 variable and the smallest within the Peer No. 1 variable. Could some factor other than chance have accounted for the tendency of self-attitudes to be positively skewed? Most other distributions were not significantly skewed. Is the relationship between attitudes referring to self and to significant others a causal relationship. If so, the direction of causality must be determined. Finally, does an undefined intervening variable account for the correlations? It would be within the scope of interpersonal theory to posit such a variable and define it as personality—

the relatively enduring pattern of interpersonal situations which characterize a human life. Research working within a different orientation might well define the variable otherwise.

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THE STRUCTURE AND MOTIVATION OF AN ADOLESCENT PEER GROUP

B. C. MUNRO
Kellogg Fellow
Faculty of Education
University of Alberta

Purpose

During the adolescent years the individual often feels confused about his role in society. Adults are not always consistent in their behavior toward him. He is aware of conflicting childish and adult desires, but finds himself out of place in both child and adult groups. One situation in which the adolescent does feel a sense of orientation is in his peer group.

... Next to the family in childhood, and probably equally with the family during adolescence, the peer group provides satisfactions to the basic urges for security in the warmth of friendship and the sense of adequacy that comes with belonging.¹

Because of the adolescent's sense of being at home with his contemporaries this investigation sought to obtain further light on this development level by a study of the structure of a typical adolescent peer group, the roles of its members and the factors influencing their behavior.

Related Studies

A review of the literature reveals certain characteristic behavior among members of the adolescent peer group. Reference will be made to acceptance, leadership and friends as focal points.

Acceptance

In a study of seven hundred children selected from grades six, nine and twelve in two central New York schools, Kuhlen and Lee² stated that at the twelfth grade level highly accepted adolescent boys initiated games, were active, socially aggressive, extroverted, friendly, enthusiastic, cheerful and popular. The least accepted boys sought attention, were restless and domineering, enjoyed fights and acted older than they were.

As the age of the group increased, the investigators found that boys were more frequently mentioned as liking the opposite sex, enjoying jokes on themselves, being willing to take a chance, and as

¹National Society for the Study of Education, *Adolescence*, p| 236.

²R. G. Kuhlen and B. J. Lee, "Personality Characteristics and Social Acceptability in Adolescence," *Journal of Educational Psychology*, (September, 1943), pp. 321-340.

being enthusiastic. They suggested that increasing sensitivity to social situations and increasing social activity were implied in these trends. With an increase in age, boys assumed a more dominant role in the adolescent social scene.

The position of rural students vanned to a town school was investigated by Bonney³. His study contained two groups of vanned and resident pupils. The first sample was 152 students from grades ten, eleven and twelve in a town of five thousand people, and the second contained ninety-four students from grades seven to twelve in a university demonstration high school. He found that in these instances "... bus students are not being accepted by their peers on an equal basis with the town students."⁴

Leaders

In a study of leadership in a group of 485 graduates of a large military school over a five year period, Gowan⁵ found that leaders tended to be slightly younger than the mean of their age group. They were significantly higher in ability and achievement, significantly less self-sufficient, more confident and sociable, and more inclined to tall, thin body types.

From the cumulative records of 1189 senior graduates from Central High School in Tulsa, Oklahoma, Reynolds⁶ selected 437 leaders and 451 non-leaders for study. He reported that high school leaders excel non-leaders in scholarship and intelligence and rate higher on personality traits.

Friends

In a study of 280 boys and girls representing a cross-section of the junior high schools of Riverside, California, Jenkins⁷ stated that the socio-economic status of the parent in the community was an important criterion in the choice of friends which the child made. He also noted that children tended to choose friends of approximately the same age and intelligence.

Using a group of 819 New York children from nine to sixteen years of age, Pintner and his associates⁸ found that physical maturity and to some extent mental maturity were far more potent in influencing friendships than were personality traits.

³M. E. Bonney, "A Sociometric Study of the Peer Acceptance of Rural Students in Three Consolidated High Schools," *Educational Administration and Supervision*, (May, 1951), pp. 234-240.

⁴*Ibid.*, p. 239.

⁵J. C. Gowan, "Relationship between Leadership and Personality Measures," *Journal of Educational Research*, (April, 1955), pp. 623-627.

⁶F. J. Reynolds, "Factors of Leadership Among Seniors of Central High Schools, Tulsa, Oklahoma," *Journal of Educational Research* (January, 1944), pp. 356-361.

⁷G. G. Jenkins, "Factors Involving Children's Friendships," *Journal of Educational Psychology*, (September, 1931), pp. 440-448.

⁸R. Pintner, G. Forlano and H. Freedman, "Personality and Attitudinal Similarities Among Classroom Friends," *Journal of Applied Psychology*, (1937), pp. 48-65.

From this review it would appear that authorities agree fairly well on the behavior that adolescent seek in their group members. There is, however, less agreement on the traits that they value in their leaders and their friends.

Method of Study

The case study method was employed in this investigation, not because of the truths it was expected to verify, but because of the insights it was expected to reveal concerning the adolescent peer group. Since age and sex are important factors in grouping, the boys of the grade eleven class of a small Alberta town were the specific group studied. To permit intensive investigation the area for study was limited to two phases of adolescence, the structure of the peer group and the factors that influence the behavior of its members.

To secure information on the nature of the group, the following sociometric measurements were made: a sociometric test asking the question, "Near whom would you like to sit?" was administered in the months of September and December, 1956, and March, 1957. Another sociometric test asking, "Whom would you like to have home with you for the Christmas holidays?" was given in December and a third test asking, "With whom would you like to attend the movies?" was given in March. In addition the Classroom Social Distance Scale developed by Cunningham was used. Two Guess Who tests were administered as well as the Sims Score Card for Socio-Economic Status and the Sims SCI Occupational Rating Scale.

To secure data of a more personal nature the following tests were used: The SRA Youth Inventory, The Rotter Incomplete Sentences Blank, The Thurstone Temperament Schedule, The Gordon Personal Profile, The Guilford-Zimmerman Temperament Survey, The Kuder Preference Record (Vocational), and the Otis Quick Scoring Test of Mental Maturity, Gamma Test.

In addition, autobiographies, interviews with parents, students and teachers and the school's cumulative record system were utilized.

Data

Group Structure

A choice pattern of the group is illustrated in Figure One. This sociogram is the result of a test administered in March, 1957, and represents a fairly stable arrangement of the group. Arrows with two heads show reciprocated choices; single arrows indicate one-way choices. The two triangles represent girls who entered into the boys' choices on this occasion.

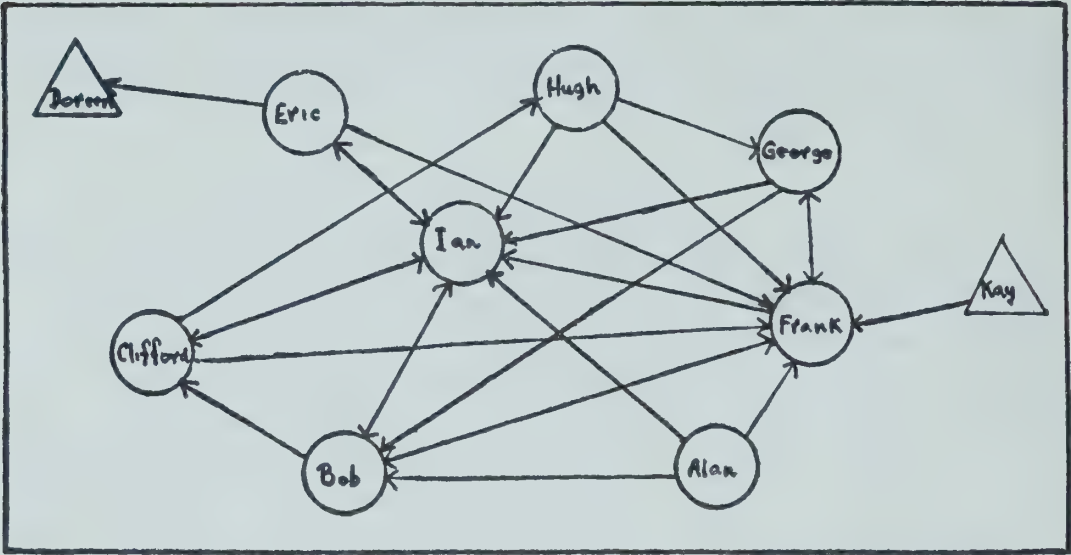


Figure 1—"Near whom would you like to sit?" Grade eleven boys, March, 1957.

From this figure Ian, Frank and Bob appeared to be the most popular boys in the group, positions they held on all the somiometric tests. These boys formed the nucleus of the group, with the other boys attempting to gain acceptance from them. The pattern of choices in this sociogram was similar to the results of the December test, but differed markedly from the one administered in September. This suggested that the early months of school were ones of flux and that a stable relationship was not reached until the boys had had time to become re-acquainted and had re-established their roles in the group.

In Table One the choices received by the boys on the three different types of sociometric tests are given.

TABLE I
CHOICES RECEIVED BY THE NINE GRADE ELEVEN
STUDENTS ON THREE DIFFERENT SOCIOMETRIC
TESTS

Sociometric Test Criterion	Alan	Bob	Clifford	Dennis	Eric	Frank	George	Hugh	Ian
Seating	2	15	7	1	3	16	4	5	19
Movies	2	4	2	...	1	5	1	0	6
Home Visit	3	2	4	...	0	3	2	1	5
Total of Choices	7	21	13	1	4	24	7	6	30

It would appear that the boys who were desirable as seatmates were also popular as companions at the movies. As far as home visits were concerned, however, the situation was somewhat different. In this instance such factors as the anticipation of the acceptance of the visitor by the family and of the family by the visitor made this choice less satisfactory in revealing inter-personal relationships.

The Classroom Social Distance Scale⁹ yields two scores, a group-social-distance score which indicates the degree of acceptance or rejection of an individual by the group, and a self-social-distance score which indicates the degree of acceptance or rejection of the group by an individual. In both instances the lower the score the greater the degree of acceptance.

While it did not yield results consistent with the sociometric tests, this scale did indicate that boys with low group-social-distance scores tended to have high self-social-distance scores and those with high group-social-distance scores had low self-social-distance scores. This suggests that those boys who appear to be well accepted tend to exert greater care in the selection of their friends and that the boys who were insecure in the group seem more ready to accept the group and its individual members.

Individual Studies

A summary of the data collected on the members of the group is given in Table Two. This should prove helpful in understanding the roles assumed by the boys in their activities within the group. The following roles were investigated: best friends, popular persons, leaders, followers and isolates.

Best friends. Interviews held in October, 1956, and March, 1957, revealed that in the group there were three pairs of friends whose relationships remained constant over the period of investigation. These were Bob and Ian, Frank and Bog, and Clifford and Hugh.

Bob and Ian showed somewhat similar patterns on the personality tests, with Bob's scores being generally lower. They come from the same social class, enjoy solitary leisure time activities and have similar adjustment problems. On the whole it appeared that this friendship was based on the similarity of the two boys.

The comparison of Frank and Bob suggests that there are few similarities in temperament and interest between them. Although the sociometric tests revealed that Bob was popular with his classmates, he did not seem to accept this, and appeared to compensate for his feelings of insecurity through Frank's activities and achieve-

⁹Ruth Cunningham and Associates, *Understanding Group Behavior of Goys and Girls*, p. 406.

TABLE II
SUMMARY OF PERSONAL DATA ON NINE GRADE ELEVEN BOYS

Name	Age	Otis I.Q.	Grade X Average Achievement	Expressed Vocational Choice	High Kuder Interest Areas	Personality Traits Based on Guilford-Zimmerman, Gordon Thurstone and Rotter Scales	Problems Revealed by SRA and Rotter Scales and Autobiographies	Socio-metric Roles	Sims Socio-Economic Status
Alan	15-6	121	63	Teacher	Mechanical Clerical	Desire to please, gets on well with others, shy, quiet, submissive, insecure, perservering.	Social	Follower Isolate	Medium
Bob	16-4	100	31	R.C.M.P.	Outdoor Artistic	Depressed, anxious, nervous, gets on well with others, somewhat irresponsible.	Home, self, school, social, future.	Popular person, Active follower	High
Clifford	17-10	100	44	Farmer	Computational Persuasive	Active, care-free, impulsive, does not like reflective thinking.	School	Active follower	Medium-high
Dennis ...	17-2	120	36	R.C.A.F.		Active, optimistic, confident, independent.	Home, school, social.	Follower	Medium
Eric	61-3	111	46	R.C.A.F.	Mechanical Persuasive	Perservering, quiet, thoughtful, likes company of others, self-centered, critical.	Social school.	Follower Isolate	Highest

Frank	16-8	123	52	Engineer	Mechanical Computa- tional Scientific	Impulsive, desire to dominate, cheerful, op- timistic, somewhat ir- responsible, extrovert- ed.	Home, school, self	Leader Popular person	High
George ...	16-3	102	47	Engineer	Mechanical Computa- tional	Hypertensive, impul- sive, pessimistic, critic- al of self.	Self, school, future, social.	Follower	High
Hugh	16-1	110	56	Undecided	Mechanical Computa- tional Musical	Inactive, quiet, likes r e f l e c t i v e thinking, critical of others, per- serving.	Social future.	Follower Isolate	
Ian	16-10	96	38	Geologist	Artistic	Active, enjoys planning activities, submissive, critical of others.	Home, self, social, future.	Popular person Active follower	Medium Low

ments. In this relationship, Frank, an extrovert, is assured of the audience he needs and can bask in the admiration of his friend. This friendship might be termed a hero-and-worshipper relationship.

Table Two indicates that there are few traits common to the boys making up the last pair of friends studied, Hugh and Clifford. The basis of association in this case seemed to be their membership in a minority group of vanned students since both boys lived on farms near town and rode the same van to school. As Bonney¹⁰ reported earlier, such boys experience some difficulty in establishing social relations with the rest of the group and might have become friends as a defence against possible rejection.

Popular persons. By sociometric measurement, Ian, Frank, Bob and Clifford were the most frequently chosen boys. An examination of Table Two suggests that factors other than personality entered into the popularity of the members of the group. Ian and Bob might have gained some measure of popularity through their close association with Frank, the recognized leader of the group. Clifford, the oldest boy, planned to leave school in the spring and the others may have identified themselves with him in this choice. Intelligence did not seem to play too great a part in determining popularity since Frank had an I.Q. of 123, Bob and Clifford had I.Q.'s of 100 and Ian's I.Q. was 96. The achievement of the four most popular boys conformed to the average achievement of the group standards of achievement.

Leaders. In this group Frank was the only widely accepted leader. He was active, care-free, optimistic, popular and cheerful. He liked to be with people and felt that he got on well with them. Frank had the highest mental ability rating of the boys with an I.Q. of 123 and was slightly above average in achievement. He was slightly older than the average age of the group.

Followers. The followers in the group tended to be less active, less stable emotionally, more restrained and submissive than the leader, as far as the personality tests could determine.

Isolates. On the sociometric tests there were four instances where individuals received no choices. In the case of Eric, his critical attitude toward the groups' activities may have been the cause. Hugh was isolated on two tests because he was not available for participation in the group due to a period of hospitalization and the pressure of school work when he returned to class. Alan was not chosen on the last sociometric test asking for seatmates because by reason of the cycling of courses in the previous year, much of his program was taken with the grade ten group. Signific-

¹⁰M. E. Bonney, *Loc. cit.*

antly, perhaps, Hugh and Alan were the youngest members of the group.

Factors Influencing the Behavior of Adolescents

Within the group

Examination of the sociometric test scores suggest that the individuals were motivated by the desire to gain acceptance in the group. This appeared to be indicated by the pattern of choices of the members, who centered their attention on Bob, Frank and Ian in their selection of seatmates. To be accepted it was also necessary to conform to the group's standards without being unduly critical of its activities. The case of Hugh, who became an isolate apparently through his two months in hospital, points up the fact that for acceptance in the group an individual must be eager and available for participation in its activities. Sharing the interests of the group was also a factor influencing acceptance. This is illustrated by the case of Alan. His program placed him in frequent contact with the grade ten class where he developed friendships and entered many activities. As a result, his classmates in grade eleven did not choose him on the last sociometric test. Alan, Hugh and George, who were not well received by the group, were also its three youngest members.

The role of the individual appeared to have some influence on his behavior. According to paragraphs written by the members, they expected their leader to be cheerful, a good sport, easy-going, sociable and active. These expectations were realized in the behavior of Frank, the only widely accepted leader. From the results of the personality tests, the followers were likely to be less active and more restrained and submissive than the leaders. The more active followers were expected to assume the lead in some activities as Clifford did in the field of athletics.

The boys in this group were just beginning to enjoy activities in the larger adolescent community of both sexes commonly called the crowd. The boys expressed a desire to learn how to dance and how to conduct themselves properly in the crowd. This suggests the increasing importance of social activities and its pressure on the members of the group.

The fact that certain students came to school by van seemed to affect their behavior. These boys were not usually available for activities with the group after school hours and as a result they were not readily taken into the social groups of the school. These students therefore tended to form close associations among themselves, as in the case of Hugh and Clifford in this study.

Outside the group

In their autobiographies and on the Rotter Incomplete Sentences Blank most of the boys indicated satisfaction with their home life. One exception to this was Dennis, who implied that he had some difficulty getting along with his family. His independent and aggressive attitude, particularly noticeable at school, might have been the result of this situation. Bob and Ian suggested that undue emphasis had been placed on academic achievement by their mothers. Their ability was such that these expectations could not be met. This might be the cause of the feelings of insecurity suggested by the personality tests. It would appear that the home exerted a major influence on the behavior of the adolescent.

Another pressure effective upon the attitudes and behavior of the individual seemed to be the school. Alan did not achieve as high a standing in his courses as he desired and this led to a fear of failure in school. This fear appeared to be transferred to other situations for on the Rotter, Alan commented, "My greatest worry is to try something and fail." Such an attitude might contribute to Alan's retiring, submissive nature.

The outstanding examples of the influence of the home and the school were the cases of Bob and Ian. Their failure to realize, in school, the expectations of their homes seems a fundamental cause of their difficulties in other areas.

Of a positive nature, the boys felt that the teachers influenced their behavior through the examples they gave and through the guidance they provided, particularly in the vocational field.

Conclusions

To permit an intensive case study approach extending over a seven month period, this investigation was limited to two phases of adolescence, the structure of the peer group and the factors influencing the behavior of its members. The group investigated was made up of the boys of the grade eleven class of a small Alberta town.

Group structure

1. The structure of the group appeared to undergo some changes during the early months of school with an increase in stability as time passed. Because of the vacation period which allowed little interaction between members, the value of the sociometric test at the beginning of the school year is rather doubtful.

2. The members seemed to choose companions for the movies on the same basis as they chose seatmates, since the sociometric tests using these two criteria yielded similar results.

3. Since factors other than inter-personal relations entered the responses to the question, "Whom would you like to have home with you to spend the Christmas holidays?" this test did not prove satisfactory in determining the structure of the group.

4. The Classroom Social Distance Scale suggested that boys most accepted by their peers tended to be careful in the selection of their friends. Those who were insecure tended to value the group more highly.

Roles

1. The results of this study suggested that the members of the group were not of equal status. The rank of the individual appeared to be determined by his role in the group structure.

2. Best friend relationships may be formed on several bases. The friendship between Bob and Ian appeared to have been founded on a similarity of personality traits and interests. Compensation and admiration seemed to be the basis of the friendship between Bob and Frank. Hugh and Clifford were members of a minority group at school, the vanned students.

3. The reason for the popularity of some of the members of the group were somewhat obscure. Frank, the leader, may have been chosen on the strength of his positive personality traits. Bob and Ian might be popular because of their close association with Frank. Clifford seemed to be rated highly by the boys through their identification with him in his decision to leave school. Intelligence did not appear to play a great part in popularity, but all the highly chosen boys appeared to work close to the average level of achievement of the group.

4. The only widely accepted leader of the group, Frank, was active, care-free, optimistic and cheerful. He liked to be with people, was popular and tended to dominate his associates. Frank had the highest mental ability rating of the boys with an I.Q. of 123, and was slightly above average in achievement. He was older than the average member of the group. In general these findings are in agreement with the earlier studies of leadership by Gowan¹¹ and Reynolds.¹²

5. According to the tests used, followers tended to be less active, less stable emotionally, more restrained and submissive than the leaders. Active followers, such as Ian, Bob and Clifford were expected to take the lead in some activities.

6. The reasons for isolation by the group appeared to be a lack of conformity to group standards and undue criticism of the group,

¹¹J. C. Gowan, *Loc. cit.*

¹²F. J. Reynolds, *Loc. cit.*

non-participation in its activities and a lack of common interests with the members. Two of the isolates, Hugh and Alan, were the youngest members of the group and so must have seemed immature to their classmates.

Factors influencing behavior

Within the group

1. One of the important factors influencing the behavior of the individual seemed to be the desire to gain acceptance in the group. To do this it appeared that a boy must gain recognition from one of the key members, share similar interests, be available and eager for participation in group activities, conform to group standards, and be near the average age of the members.

2. The role assumed by the individual in the group also had an effect on his behavior, since the members associated certain traits with the positions of leader, follower, popular person and friend.

3. The increasing importance of social activities seemed to exert pressure on the members of the group. They found it necessary to get along, not with the boys, but with the girls who increasingly entered into their activities.

4. The students who came to school by van were not readily taken into the social groups of the school and tended to form close associations among themselves.

Outside the group.

1. Outside the group the home seemed to exert considerable pressure on the individual. The hostility of Dennis and the insecurity of Bob and Ian appeared to be directly related to home conditions.

2. The school also seemed to affect the behavior of the individual. The transfer of fear of failure in school subjects to other situations seemed evident in Alan. In the cases of Bob and Ian, the school situation seemed to contribute to their adjustment problems. The teachers influenced the boys by their example and through guidance, particularly in the vocational field.

Future Studies

There are many areas related to this study in which research would increase the knowledge of the structure and motivation of the adolescent peer group. An investigation of rural and urban schools would broaden the scope of the study. To discover the developmental nature of the group structure, the boys in grades nine, ten and twelve would have to be involved. The problems of

the vanned student and his interaction with the group might also be worthy of investigation.

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BOOK REVIEW

THE ENGLISH LANGUAGE ARTS IN THE SECONDARY SCHOOL

By The Commission on the English Curriculum of the National Council of Teachers of English. New York, Appleton-Century-Crofts, 1956. pp. 471. \$4.00.

This is an authoritative volume. The third in the series prepared by the Commission on the English Curriculum of the National Council of Teachers of English, it is the result of a decade of work by recognized leaders among the teachers of English in the high schools and colleges of the United States and embodies the latest findings of educational research in its field.

Like previous publications of the Council it gives life to its theories by supplying numerous illustrations of procedures used by classroom teachers in the junior and senior high schools throughout the country. Although the examples come from outstanding teachers having access to resources beyond those available to most Alberta teachers, an alert reader will be stimulated to make adaptations to his own circumstances. Some of the chapters, of course, are bound so closely to the American scene that they have little to offer us in Canada, but a good two-thirds of the book is as useful north of the international boundary as south of it.

Chapter 4, BUILDING INSTRUCTIONAL UNITS, will be helpful to teachers of Literature 10 and Literature 20 who are looking for detailed suggestions on how a unit may be handled; forty-two pages of the chapter are devoted to the discussion of one illustrative unit. For those familiar with the Alberta program, Chapter 5, MEETING YOUTH'S NEEDS THROUGH LITERATURE, will probably be found less useful than DEVELOPING COMPETENCE IN READING, which sets forth the views of informed persons on an issue currently engaging our attention. The section on vocabulary building in this chapter is excellent; anyone who reads it will never again use workbooks containing prepared lists of words to be learned at the rate of twenty per week. The chapter on DEVELOPING COMPETENCE IN LISTENING provides an emphasis that is often neglected. The authors assert, "Training in how to listen will determine, in no small measure, how well young people differentiate truths from half-truths, facts from opinions, sensations from emotions, propaganda from education."

MEETING YOUTH'S NEEDS THROUGH WRITING has a number of useful suggestions and faces the central problem in a practical way.

"How much should students write? No one knows the answer to this question, but there is a universal feeling that they should write more than they do. Some teachers plan a substantial piece of writing every fortnight. Some manage brief bits of summary or personal reaction every day. Others hope for some carefully formulated report or narrative every week.

"With large classes, and many of them, teachers have become thoroughly discouraged. Committees like the one in California are seeking reduced loads for English teachers. The outlook is not promising. With the shortage of teachers and mounting enrollments such an approach to the problem looks all but futile. Moreover, research has been unable to prove that meticulous correction of papers pays dividends. More research comparing different methods of securing results in writing is urgently needed.

"In the meantime, certain courses are open to the teachers. One is to do more stimulating and more building up of ideas before students write so as to make less correcting necessary after they have written. A second is to devise all possible methods of self-help for students to use in the final editing of their own papers."

Specific suggestions are given to help the teachers pursue both of these courses.

The pages on GRAMMAR, USAGE AND SPELLING will comfort the teachers who have kept up to date with their professional reading but will distress those who still revere the memory of THE ONTARIO HIGH SCHOOL GRAMMAR, which passed away in this province in June, 1938. Readers are reminded that "Mere definition or identification is of minor use in the teaching of grammar" . . . "The real evidence of a student's grasp of grammatical concepts lies in his ability (1) to write good sentences, (2) to manipulate parts of sentences easily, and (3) to improve sentences which need improvement." Also of interest to teachers of the Alberta senior high school language courses is the view expressed about handbooks. "There will be frequent needs both in school and in adult life to consult reliable sources of information on current usage. It is, therefore, important that the teacher develop in every student an attitude favorable to consulting such handbooks."

This book is a *must* for the English specialist.

MORRISON WATTS
Director of Curriculum
Department of Education

